Remarks/Arguments

Claims 1-56, 58-64, 66 and 68 are pending in the present application. Claim 36 is canceled herein. The claims have been amended to correct improper claim dependencies. Claim 1 has been amended to recite that the Marker is a at least one macromolecule having a molecular weight of at least 2000 Da, a plurality of low molecular weight marker units or a combination of at least one low molecular weight marker unit and at least one macromolecular marker unit having a molecular weight of at least 2000 da, as disclosed at page 13, section 1.3.3.3.1. This latter amendment is supported by the disclosure at page 14, fifth full paragraph. Further support for the molecular weight of the macromolecules is found through out the specification, *e.g.*, §§ 1.3.1, 1.3.2. and 1.3.3.3.1. Further amendments to the claims have been made to place the claims in proper format. Accordingly, no new matter is added by these amendments to the claims..

I. Claim Objections

It is respectfully submitted that the amendments to the claims render the grounds of objection to claims 6-50, 52, 66 and 68 moot.

II. Rejection of Claims Under 35 U.S.C. § 102(e)

Claims 1-5 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Bodepudi et al. (US 20070208169). The Office Action asserts that the cited reference discloses each of the elements of the claimed invention.

This rejection is respectfully traversed as follows.

As amended above, the marker component of the present invention is one or more large macromolecular structures or a plurality of low molecular weight units or a combination of low molecular weight units and macromolecular units, *e.g.*, proteins, nucleic acids, dendrimers,

particles etc. Some of the marker components of the present invention are orders of magnitude larger than the structures disclosed in the cited invention (linker or labels).

The present macromolecules also include a linker comprising a polymer which has an average length of between 50 and 20,000 chain atoms. The length of the linker provides sufficient space between the macromolecular sized marker and the nucleotide/nucleoside component of the macromolecular compound to enable the nucleotide/nucleoside to retain its activity as a substrate for various enzymes. Consequently, the claimed macromolecular markers can be coupled to the nucleotide moiety prior to the enzymatic incorporation of nucleotide analogs into a growing strand of nucleic acids without impeding the substrate properties of nucleotide moiety, as described in Cherkasov et al., "*New Nucleotide Analogues with Enhanced Signal Properties,*" Bioconjugate Chem., 2010, vol. 21, 122-129. (copy enclosed)

In contrast, the cited reference merely discloses the combination of conventional low molecular weight markers and linkers. The cited prior art discloses a linker having a maximal possible structure of "(CH2CH2O)n where n is an integer from 1 to 30." The molecular weight of such a linker is about 1000-1200 Da, which is in the usual range of fluorescent dyes, such as Cy3 or Cy5 or Cy7. Thus, even a linker with maximal size as described in Bodepudi does not take much more "space" than a usual fluorescent dye. Therefore, the cited reference fails to disclose either the linker or macromolecular-sized marker incorporated into the claimed macromolecular compounds. Thus, the cited prior art fails to anticipate the claimed invention.

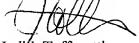
Accordingly, the rejection of claims 1-5 under 35 U.S.C. § 102(b) over Bodepudi et al. is respectfully traversed.

It is respectfully submitted that the present application, as amended above, is in condition for allowance, an early notification thereof being earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



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